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Chemical glycan conjugation controls the biodistribution and kinetics of proteins in live animals

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Abstract

© 2014 Bentham Science Publishers. The biodistributions and in vivo kinetics of chemically prepared neoglycoproteins have been examined previously and are reviewed here. A variety of mono- and oligosaccharides may be conjugated onto a protein surface using chemical methods. The kinetics and organ-specific accumulation profiles of these glycoconjugates, introduced through intravenous injection, have been analyzed using conventional dissection studies as well as noninvasive methods, such as SPECT, PET, or fluorescence imaging. These studies have revealed glycan-dependent protein distribution kinetics that may be useful for pharmacological and diagnostic applications.

Keywords

Albumin, Bioconjugation, Biodistribution, Chemical reaction, In vivo imaging, N-glycans, Neoglycoprotein, Tumor targeting